SUBSEQUENCE SEARCH.

Julie, here are the sequences that you requested,

You can match up sequences with the hits, for example I've made a start on pages 6-7, matching query sequences with those hit reg. nos. found in the four CA abstracts. Let me know if I can explain further.

Dilip.

```
    FILE 'REGISTRY' ENTERED AT 13:08:37 ON 13 OCT 93
SEQ ID:  26 E DNPIDSCWRGDSNWAQNRMK/SQEP 5
 nos:    27 E DSNWAQNRMKLADCAVGFGS/SQEP 5
         28 E LADCAVGFGSSTMGGKGGDL/SQEP 5
L1       29 E STMGGKGGDLYTVTNSDDDP/SQEP 5
         32 E GATRDRPLWIIFSGNMNIKL/SQEP 5
         33 E IFSGNMNIKLKMPMYIAGYK/SQEP 5
         35 E TFDGRGAQVYIGNGGPCVFI/SQEP 5
         36 E IGNGGPCVFIKRVSNVIIHG/SQEP 5
L2       37 E KRVSNVIIHGLYLYGCSTSV/SQEP 5
         39 E LGNVLINESFGVEPVHPQDG/SQEP 5
         40 E GVEPVHPQDGDALTLRTATN/SQEP 5
         41 E DALTLRTATNIWIDHNSFSN/SQEP 5
         42 E IWIDHNSFSNSSDGLVDVTL/SQEP 5
L3       43 E SSDGLVDVTLTSTGVTISNN/SQEP 5
         44 E TSTGVTISNNLFFNHHKVML/SQEP 5
         45 E LFFNHHKVMLLGHDDAYSDD/SQEP 5
         46 E LGHDDAYSDDKSMKVTVAFN/SQEP 5
         48 E QFGPNCGQRMPRARYGLVHV/SQEP 5
L4       49 E PRARYGLVHVANNNYDPWTI/SQEP 5
         50 E ANNNYDPWTIYAIGGSSNPT/SQEP 5
         51 E YAIGGSSNPTILSEGNSFTA/SQEP 5
         52 E ILSEGNSFTAPNESYKKQVT/SQEP 5
         55 E CSNWVWQSTQDVFYNGAYFV/SQEP 5
L5       56 E DVFYNGAYFVSSGKYEGGNI/SQEP 5
         57 E SSGKYEGGNIYTKKEAFNVE/SQEP 5
         58 E YTKKEAFNVENGNATPQLTK/SQEP 5
         59 E NGNATPQLTKNAGVLTCSLS/SQEP 5
         60 E NAGVLTCSLSKRC/SQEP 5
L6       66 E DNPIDSCWRGDSNWAQNRMKDSNWAQNRMKLADCAVGFGSSTMGGKGGDL/SQEP
         67 E KMPMYIAGYKTFDQRGAQVYIGNGGPCVFI/SQEP 5
         68 E DALTLRTATNIWIDHNSFSNSSDGLVDVTL/SQEP 5
         69 E LFFNHHKVMLLGHDDAYSDDKSMKVTVAFNQFGPNCGQRMPRARYGLVHV/SQEP
         70 E CSNWVWQSTQDVFYNGAYFVSSGKYEGGNIYTKKEAFNVE/SQEP 5
L1          1 S E3

    FILE 'CA' ENTERED AT 13:50:58 ON 13 OCT 93
L2          1 S L1 OR L1/D
              SEL HIT RN

    FILE 'REGISTRY' ENTERED AT 13:52:25 ON 13 OCT 93
L3          1 S L1 AND E166
L7         34 E KMPMYIAGYKTFDGRGAQVY/SQEP 5

=>
```

800 ~~448~~ 6533.

Subsequence Search.

```
=> file reg;d que l9
FILE 'REGISTRY' ENTERED AT 16:14:54 ON 13 OCT 93
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STRUCTURE FILE UPDATES:  08 OCT 93   HIGHEST RN 150519-96-3
DICTIONARY FILE UPDATES: 13 OCT 93   HIGHEST RN 150519-96-3


L1 SEQ ID: 26,27,28,29,32,33  4 SEA FILE=REGISTRY DNPIDSCWRGDSNWAQNRMK|DSNWAQNRMKLADCAVGF
                                GS|LADCAVGFGSSTMGGKGGDL|STMGGKGGDLYTVTNSDDDP|GATRDRPLWIIF
                                SGNMNIKL|IFSGNMNIKLKMPMYIAGYK/SQSP
L2 35,36,37,39,40             2 SEA FILE=REGISTRY TFDGRGAQVYIGNGGPCVFI|IGNGGPCVFIKRVSNVII
                                HG|KRVSNVIIHGLYLYGCSTSV|LGNVLINESFGVEPVHPQDG|GVEPVHPQDGDA
                                LTLRTATN/SQSP
L3 41,42,43,44,45             2 SEA FILE=REGISTRY DALTLRTATNIWIDHNSFSN|IWIDHNSFSNSSDGLVDV
                                TL|SSDGLVDVTLTSTGVTISNN|TSTGVTISNNLFFNHHKVML|LFFNHHKVMLLG
                                HDDAYSDD/SQSP
L4 46,48,49,50,51             2 SEA FILE=REGISTRY LGHDDAYSDDKSMKVTVAFN|QFGPNCGQRMPRARYGLV
                                HV|PRARYGLVHVANNNYDPWTI|ANNNYDPWTIYAIGGSSNPT|YAIGGSSNPTIL
                                SEGNSFTA/SQSP
L5 52,55,56,57,58             2 SEA FILE=REGISTRY ILESEGNSFTAPNESYKKQVT|CSNWVWQSTQDVFYNGA
                                YFV|DVFYNGAYFVSSGKYEGGNI|SSGKYEGGNIYTKKEAFNVE|YTKKEAFNVEN
                                GNATPQLTK/SQSP
L6 59,60,66,67,68             3 SEA FILE=REGISTRY NGNATPQLTKNAGVLTCSLS|NAGVLTCSLSKRC|DNPI
                                DSCWRGDSNWAQNRMKDSNWAQNRMKLADCAVGFGSSTMGGKGGDL|KMPMYIAGYK
                                TFDQRGAQVYIGNGGPCVFI|DALTLRTATNIWIDHNSFSNSSDGLVDVTL/SQSP
L7 69,70,34                   2 SEA FILE=REGISTRY LFFNHHKVMLLGHDDAYSDDKSMKVTVAFNQFGPNCGQR
                                MPRARYGLVHV|CSNWVWQSTQDVFYNGAYFVSSGKYEGGNIYTKKEAFNVE|KMPM
                                YIAGYKTFDGRGAQVY/SQSP
L9                            5 SEA FILE=REGISTRY L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7


=> file ca;d que l11;d l11 bib abs hitrn 1-4
FILE 'CA' ENTERED AT 16:15:37 ON 13 OCT 93
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
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FILE COVERS 1967 -  2 Oct  93 (931002/ED)  VOL 119 ISS 14.


L1                            4 SEA FILE=REGISTRY DNPIDSCWRGDSNWAQNRMK|DSNWAQNRMKLADCAVGF
                                GS|LADCAVGFGSSTMGGKGGDL|STMGGKGGDLYTVTNSDDDP|GATRDRPLWIIF
                                SGNMNIKL|IFSGNMNIKLKMPMYIAGYK/SQSP
L2                            2 SEA FILE=REGISTRY TFDGRGAQVYIGNGGPCVFI|IGNGGPCVFIKRVSNVII
                                HG|KRVSNVIIHGLYLYGCSTSV|LGNVLINESFGVEPVHPQDG|GVEPVHPQDGDA
                                LTLRTATN/SQSP
L3                            2 SEA FILE=REGISTRY DALTLRTATNIWIDHNSFSN|IWIDHNSFSNSSDGLVDV
                                TL|SSDGLVDVTLTSTGVTISNN|TSTGVTISNNLFFNHHKVML|LFFNHHKVMLLG
                                HDDAYSDD/SQSP
L4                            2 SEA FILE=REGISTRY LGHDDAYSDDKSMKVTVAFN|QFGPNCGQRMPRARYGLV
                                HV|PRARYGLVHVANNNYDPWTI|ANNNYDPWTIYAIGGSSNPT|YAIGGSSNPTIL
                                SEGNSFTA/SQSP
L5                            2 SEA FILE=REGISTRY ILESEGNSFTAPNESYKKQVT|CSNWVWQSTQDVFYNGA
                                YFV|DVFYNGAYFVSSGKYEGGNI|SSGKYEGGNIYTKKEAFNVE|YTKKEAFNVEN
                                GNATPQLTK/SQSP
L6                            3 SEA FILE=REGISTRY NGNATPQLTKNAGVLTCSLS|NAGVLTCSLSKRC|DNPI
```

DSCWRGDSNWAQNRMKDSNWAQNRMKLADCAVGFGSSTMGGKGGDL|KMPMYIAGYK
TFDQRGAQVYIGNGGPCVFI|DALTLRTATNIWIDHNSFSNSSDGLVDVTL/SQSP

L7 2 SEA FILE=REGISTRY LFFNHHKVMLLGHDDAYSDDKSMKVTVAFNQFGPNCGQR MPRARYGLVHV|CSNWVWQSTQDVFYNGAYFVSSGKYEGGNIYTKKEAFNVE|KMPM YIAGYKTFDGRGAQVY/SQSP

L9 5 SEA FILE=REGISTRY L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7

L11 4 SEA FILE=CA L9 OR L9/D

L11 ANSWER 1 OF 4 COPYRIGHT 1993 ACS
AN CA118(23):232262v
TI Allergenic proteins and peptides from Japanese cedar pollen
AU Griffith, Irwin J.; Pollock, Joanne; Bond, Julian F.
CS Immulogic Pharmaceutical Corp.
LO USA
SO PCT Int. Appl., 71 pp.
PI WO 9301213 A1 21 Jan 1993
DS W: AU, CA, JP, KR
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE
AI WO 92-US5661 10 Jul 1992
PRAI US 91-729134 12 Jul 1991
US 91-730452 15 Jul 1991
IC ICM C07K015-10
ICS A61K039-36
SC 15-2 (Immunochemistry)
SX 3, 11
DT P
CO PIXXD2
PY 1993
LA Eng
AN CA118(23):232262v
AB Amino acid and nucleic acid sequences for Cryptomeria japonica major pollen allergen Cry j I and fragments thereof are provided, as are purified allergen and recombinantly produced allergen. The allergen and fragments are useful for diagnosing, treating, and preventing Japanese cedar polinosis. Three Cry j I isoforms of different mol. wt. were purified from pollen ext. by chromatog.; the mol. wts. were 40-35 kDa by SDS-PAGE under both reducing and nonreducing conditions and the pIs were 9.5-8.6. RNA was extd. from Japanese cedar pollen and staminate cones, cDNA was synthesized, and the DNA was cloned and sequenced from 2 clones. Recombinant Cry j I was expressed in Escherichia coli and tested against Cry j I-reactive T-cells of a Japanese cedar pollen allergic patient. The recombinant allergen had Cry j I T-cell epitopes. Recombinant Cry j I did not show IgE reactivity.
IT **147446-71-7**, Allergen Cry j I (Cryptomeria japonica clone JC130a precursor reduced) **147446-75-1**, Allergen Cry j I (Cryptomeria japonica clone JC130a reduced)
(amino acid sequence of, complete)

L11 ANSWER 2 OF 4 COPYRIGHT 1993 ACS
AN CA118(11):100276t
TI Epitopes on Cry j I and Cry j II for the human IgE antibodies cross-reactive between Cupressus sempervirens and Cryptomeria japonica pollen

AU Taniai, Madoka; Kayano, Tohru; Takakura, Rohko; Yamamoto, Shigeto; Usui, Mitsuko; Ando, Shunsaku; Kurimoto, Masashi; Panzani, Raphael; Matuhasi, Tyoku
CS Hayashibara Biochem. Lab., Inc.
LO Fujisaki 702, Japan
SO Mol. Immunol., 30(2), 183-9
SC 15-9 (Immunochemistry)
DT J
CO MOIMD5
IS 0161-5890
PY 1993
LA Eng
AN CA118(11):100276t
AB Forty sera from French patients allergic to C. sempervirens pollen were tested for cross-reactivities against Cry j I, Cry j II (major allergens of C. japonica pollen), and other pollen allergens from botanically related plants. Of the sera, 73% reacted with either Cry j I or Cry j II, or with both of them. These IgE cross-reactions were blocked effectively by monoclonal antibody (mAb) 046 (anti-Cry j I) or N26, T27 (anti-Cry j II), and weakly by mAbs 052, 027, and 026 (anti-Cry j I). Furthermore, the IgE antibodies in 2 sera, #40 and #11, bound to peptide fractions obtained from enzyme-digested Cry j I, and mAb 027 could also bind to the fractions. Analyses of the amino acid sequences of the peptides revealed that reactive peptides contained the NGNATPQLTKNAGVLTCSLSKR sequence and the 3rd residue N3 was glycosylated, however, when the N3 was not glycosylated, the IgE antibodies did not react, but mAb 027 could. The glycosylation of the N3 might be required for IgE-binding to the peptides. The sugar component on the N3 residue was found to be 0.4 mol galactose, 1.3 mol mannose, 0.8 mol fucose, and 2.0 mol N-acetylglucosamine. Cross-reactivities against other pollen allergens from botanically related plants were found in most of the sera. However, many of these reactivities were detected by sandwich ELISA but not by an ELISA using allergen-coated plates, indicating that it is important to select an appropriate ELISA procedure to detect an allergen or an IgE antibody to an allergen.
IT **146117-16-0**
(of major allergen I of cedar, human IgE to cypress pollen crossreactivity with)

L11 ANSWER 3 OF 4 COPYRIGHT 1993 ACS
AN CA117(25):249836n
TI Antigenic analyses of Sugi basic protein by monoclonal antibodies: II. Detection of immunoreactive fragments in enzyme-cleaved Cry j I
AU Kawashima, Tomoko; Taniai, Madoka; Usui, Mitsuko; Ando, Shunsaku; Kurimoto, Masashi; Matuhasi, Tyoku
CS Hayashibara Biochem. Lab.
LO Okayama, Japan
SO Int. Arch. Allergy Immunol., 98(2), 118-26
SC 15-9 (Immunochemistry)
DT J
CO IAAIEG
IS 1018-2438
PY 1992
LA Eng
AN CA117(25):249836n
AB Four anti-Cry j I mAbs showing an epitope specificity different from

each other, 046, 029, 026, and 027, were selected to analyze the structure of the antigenic determinant for each mAb on a Cry j I mol. Immunoreactive fragments in enzyme-cleaved Cry j I were detected by means of the adsorption on the mAb column and of the binding to the mAbs on ELISA. The mAb 026 was reactive with the fragments contg. a Cry j I N-terminal region obtained by V8 protease or pepsin digestion, but not with those by lysylendopeptidase digestion. The mAb 027 bound to the fragments contg. a linear structure of Asn-Ala-Gly-Val-Leu-Thr-Cys-Ser-Leu-Ser-Lys, which were generated by V8 protease, lysylendopeptidase, or pepsin digestion. Furthermore, the synthetic peptide Asn-Ala-Gly-Val-Leu-Thr-Cys-Ser-Leu-Ser-Lys-Arg could bind to 027, but not to 026, and could inhibit the binding of 027 to Cry j I or to its immunoreactive fragments. No fragments capable of reacting with the mAbs 046 and 029 were found, suggesting that 046 and 029 recognize a conformational epitope of Cry j I mol. which is destroyed by enzymic cleavage. The epitope recognized by the mAbs 027 or 026 was located in a conformationally hidden part of the mol. which was exposed to react with the mAbs only after the physicochem. or enzymic treatment.

IT 144722-99-6 **144723-00-2**
(of allergen from Japanese cedar pollen, epitopes in)

L11 ANSWER 4 OF 4 COPYRIGHT 1993 ACS
AN CA112(8):62606s
TI Sugar conjugate of cedar pollen allergen as hyposensitization agent
AU Matsuhashi, Tyoku; Usui, Mitsuko; Mitsuhashi, Masakazu; Ando, Shunsaku
CS Hayashibara Biochemical Laboratories, Inc.
LO Japan
SO Eur. Pat. Appl., 6 pp.
PI EP 308147 A1 22 Mar 1989
DS R: DE, FR, GB
AI EP 88-308370 9 Sep 1988
PRAI JP 87-228781 12 Sep 1987
JP 88-184487 26 Jul 1988
IC ICM A61K039-36
ICS C07K015-10; A61K047-00
SC 63-4 (Pharmaceuticals)
DT P
CO EPXXDW
PY 1989
LA Eng
AN CA112(8):62606s
AB A hyposensitization agent is prepd. by covalently attaching a saccharide, e.g. homo- and heteroglycans, for example, starch, amylose, dextran, polysucrose, pullulan, elsinan, curdlan, gum arabic, gum tragacanth, guar gum, xanthan gum, carrageenan, pectin, cellulose, glucomannan, chitosan, and lipopolysaccharide, and their derivs. and partial hydrolyzates, to a cedar pollen allergen. The hyposensitization agent can be administered to a cedar pollenosis patient without eliciting anaphylaxis and allergy within a shortened hyposensitization period because the hyposensitization agent enhances the prodn. of IgG and M antibodies which are specific to intact cedar pollen allergen, but reduces the prodn. of IgE antibody which is specific to the allergen and responsible for anaphylaxis and allergy. A soln. of 5 g pullulan in 400 mL water was adjusted to pH 10.7 with NaOH, treated with 3 g BrCN, adjusted to pH 5 with HCl

and dialyzed against water. The resulting activated pullulan soln. was treated with 200 mL 0.015% cedar pollen allergen soln., followed, after 24 h, by addn. of acetone (1:3 by vol.) to obtain a ppt., which was sepd., dissolved in 0.001M acetate buffer (pH 5), and centrifuged. The supernatant was purified on CM sephadex, to give a hyposensitization agent. The agent, administered repeatedly i.p. to mice, together with Al(OH)3, increased the titer of G and M antibodies, but not that of E antibodies, compared to controls administered a mixt. of cedar pollen allergen and pullulan. A partial amino acid sequence of the cedar pollen allergen is given.

IT 124832-22-0 **124832-23-1** 124832-24-2 124832-25-3
(of cedar pollen allergen, for allergy treatment)

Julie, these are hit RN from the four CA abstracts.

```
=> sel hit rn l11 1-4
E6 THROUGH E10 ASSIGNED

=> file reg;s l9 and e6-10
FILE 'REGISTRY' ENTERED AT 16:17:00 ON 13 OCT 93
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STRUCTURE FILE UPDATES:  08 OCT 93   HIGHEST RN 150519-96-3
DICTIONARY FILE UPDATES: 13 OCT 93   HIGHEST RN 150519-96-3


L12          5 L9 AND (124832-23-1/RN OR 144723-00-2/RN OR 146117-16-0/RN
                OR 147446-71-7/RN OR 147446-75-1/RN)

=> d l12 rn cn kwic 1-5

L12  ANSWER 1 OF 5  COPYRIGHT 1993 ACS
RN   147446-75-1  REGISTRY
CN   Allergen Cry j I (Cryptomeria japonica clone JC130a reduced) (9CI)
     (CA INDEX NAME)
```

SEQ ID:16 SEQ ID:28 SEQ ID:32

```
SEQ      1 DNPIDSCWRG DSNWAQNRMK LADCAVGFGS STMGGKGGDL YTVTNSDDDP
          ========== ========== ========== ========== ==========
        51 VNPAPGTLRY GATRDRPLWI IFSGNMNIKL KMPMYIAGYK TFDGRGAQVY
                      ========== ========== ========== ==========
       101 IGNGGPCVFI KRVSNVIIHG LYLYGCSTSV LGNVLINESF GVEPVHPQDG
           ========== ========== ========== ========== ==========
       151 DALTLRTATN IWIDHNSFSN SSDGLVDVTL TSTGVTISNN LFFNHHKVML
           ========== ========== ========== ========== ==========
       201 LGHDDAYSDD KSMKVTVAFN QFGPNCGQRM PRARYGLVHV ANNNYDPWTI
           ========== ========== ========== ========== ==========
       251 YAIGGSSNPT ILSEGNSFTA PNESYKKQVT IRIGCKTSSS CSNWVWQSTQ
           ========== ==========                      ==========
       301 DVFYNGAYFV SSGKYEGGNI YTKKEAFNVE NGNATPQLTK NAGVLTCSLS
           ========== ========== ========== ========== ==========
       351 KRC
           ===
HITS AT:   1-50, 61-270, 291-353

L12  ANSWER 2 OF 5  COPYRIGHT 1993 ACS
RN   147446-71-7  REGISTRY
CN   Allergen Cry j I (Cryptomeria japonica clone JC130a precursor
     reduced) (9CI)  (CA INDEX NAME)

SEQ      1 MDSPCLVALL VFSFVIGSCF SDNPIDSCWR GDSNWAQNRM KLADCAVGFG
                                 ========== ========== ==========
        51 SSTMGGKGGD LYTVTNSDDD PVNPAPGTLR YGATRDRPLW IIFSGNMNIK
           ========== ========== =          ========== ==========
       101 LKMPMYIAGY KTFDGRGAQV YIGNGGPCVF IKRVSNVIIH GLYLYGCSTS
           ========== ========== ========== ========== ==========
       151 VLGNVLINES FGVEPVHPQD GDALTLRTAT NIWIDHNSFS NSSDGLVDVT
           ========== ========== ========== ========== ==========
       201 LTSTGVTISN NLFFNHHKVM LLGHDDAYSD DKSMKVTVAF NQFGPNCGQR
           ========== ========== ========== ========== ==========
       251 MPRARYGLVH VANNNYDPWT IYAIGGSSNP TILSEGNSFT APNESYKKQV
```

```
           ========== ========== ========== ========== =
       301 TIRIGCKTSS SCSNWVWQST QDVFYNGAYF VSSGKYEGGN IYTKKEAFNV
                       ========= ========== ========== ==========
       351 ENGNATPQLT KNAGVLTCSL SKRC
           ========== ========== ====
HITS AT:   22-71, 82-291, 312-374
```

L12 ANSWER 3 OF 5 COPYRIGHT 1993 ACS
RN **146117-16-0** REGISTRY
CN L-Arginine, L-asparaginylglycyl-L-asparaginyl-L-alanyl-L-threonyl-L-prolyl-L-glutaminyl-L-leucyl-L-threonyl-L-lysyl-L-asparaginyl-L-alanylglycyl-L-valyl-L-leucyl-L-threonyl-L-cysteinyl-L-seryl-L-leucyl-L-seryl-L-lysyl- (9CI) (CA INDEX NAME)

```
SEQ      1 NGNATPQLTK NAGVLTCSLS KR
           ========== ==========
HITS AT:   1-20
```

SEQ ID 59 (1-20)

L12 ANSWER 4 OF 5 COPYRIGHT 1993 ACS
RN **144723-00-2** REGISTRY
CN Glycine, L-.alpha.-aspartyl-L-asparaginyl-L-prolyl-L-isoleucyl-L-.alpha.-aspartyl-L-seryl-L-cysteinyl-L-tryptophyl-L-arginylglycyl-L-.alpha.-aspartyl-L-seryl-L-asparaginyl-L-tryptophyl-L-alanyl-L-glutaminyl-L-asparaginyl-L-arginyl-L-methionyl-L-lysyl-L-leucyl-L-alanyl-L-.alpha.-aspartyl-L-lysyl-L-alanyl-L-valyl- (9CI) (CA INDEX NAME)

```
SEQ      1 DNPIDSCWRG DSNWAQNRMK LADKAVG
           ========== ==========
HITS AT:   1-20
```

SEQ ID: 66 (1-20)

L12 ANSWER 5 OF 5 COPYRIGHT 1993 ACS
RN **124832-23-1** REGISTRY
CN L-Lysine, L-.alpha.-aspartyl-L-asparaginyl-L-prolyl-L-isoleucyl-L-.alpha.-aspartyl-L-seryl-L-cysteinyl-L-tryptophyl-L-arginylglycyl-L-.alpha.-aspartyl-L-seryl-L-asparaginyl-L-tryptophyl-L-alanyl-L-glutaminyl-L-asparaginyl-L-arginyl-L-methionyl- (9CI) (CA INDEX NAME)

```
SEQ      1 DNPIDSCWRG DSNWAQNRMK
           ========== ==========
HITS AT:   1-20
```

SEQ ID 66 (1-20)

REGISTRY "EXACT" SEQUENCE SEARCH

```
=> file reg
FILE 'REGISTRY' ENTERED AT 13:08:37 ON 13 OCT 93
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STRUCTURE FILE UPDATES:  08 OCT 93   HIGHEST RN 150519-96-3
DICTIONARY FILE UPDATES: 13 OCT 93   HIGHEST RN 150519-96-3

=> e dnpidscwrgdsnwaqnrmk/sqep 5
E1             1     DNPGEDAPA/SQEP
E2             1     DNPGEDAPAEDLAR/SQEP
E3 SEQ ID:26   1 --> DNPIDSCWRGDSNWAQNRMK/SQEP
E4             1     DNPIDSCWRGDSNWAQNRMKLADCAVGFGSSTMGGKGGDLYTVTNSDDDPVNPA
                     PGTLRYGATRDRPLWIIFSGNMNIKLKMPMYIAGYKTFDGRGAQVYIGNGGPCV
                     FIKRVSNVIIHGLYLYGCSTSVLGNVLINESFGVEPVHPQDGDALTLRTATNIW
                     IDHNSFSNSSDGLVDVTLTSTGVTISNNLFFNHHKVML/SQEP
E5             1     DNPIDSCWRGDSNWAQNRMKLADKAVG/SQEP

=> e dsnwaqnrmkladcavgfgs/sqep 5
E6             1     DSNRG/SQEP
E7             1     DSNTGCPPSYDGYCLNGGVCMYVESVDRYVCNCVIGYIGERCQHRDL/SQEP
E8 SEQ ID: 27  0 --> DSNWAQNRMKLADCAVGFGS/SQEP
E9             1     DSP'AAN'GRG/SQEP
E10            1     DSP'BAL'RG/SQEP

=> e ladcavgfgsstmggkggdl/sqep 5
E11            1     LADASET/SQEP
E12            1     LADAVAVTMGPKGR/SQEP
E13 SEQ ID: 28 0 --> LADCAVGFGSSTMGGKGGDL/SQEP
E14            1     LADEQPEPRTRRRAYLWCKEFLPGAWRGLREDQFHISVIRGGLSNMLFQCSLPD
                     SIASVGDEPRKVLLRLYGAILKMGAEAMVLESVMFAILAERSLGPKLYGIFPQG
                     RLEQFIPSRRLDTEELCLPDISAEIAEKMATFHGMKMPFNKEPKWLFGTMEKYL
                     NQVLRLKFSREARVQQLHKFLSYNLPLELENLRSLLQY/SQEP
E15            1     LADFLSRSGGVGKNNFVPTNVGSKA/SQEP

=> e stmggkggdlytvtnsdddp/sqep 5
E16            1     STLYQNGGTYVSVGTSTLNK/SQEP
E17            1     STLYQNVGTYVSVGTSTLNK/SQEP
E18 SEQ ID: 29 0 --> STMGGKGGDLYTVTNSDDDP/SQEP
E19            1     STMNHSPVRNYCLHAESV/SQEP
E20            1     STMPTGAGVD/SQEP

=> e gatrdrplwiifsgnmnikl/sqep 5
E21            1     GATPERPRLR/SQEP
E22            1     GATPQDLNTML/SQEP
E23 SEQ ID: 32 0 --> GATRDRPLWIIFSGNMNIKL/SQEP
E24            1     GATTWYF/SQEP
E25            1     GATVGHFGVYTRVSQYIEWLQKL/SQEP

=> e ifsgnmniklkmpmyiagyk/sqep 5
E26            1     IFRPGGGDMRNWRSELYKYKV/SQEP
E27            1     IFSFDDLVCPSVTSLRVNVE/SQEP
E28 SEQ ID: 33 0 --> IFSGNMNIKLKMPMYIAGYK/SQEP
E29            1     IFSIIFIALLILLITTIVMFLASILSKKALIDREKSSPFECGFDPKSSSRLPFS
                     LRFFLITIIFLIFDVEIALILPMIIIMKYSNIMIWTITSIIFILILLIGLYHEW
```

```
                    NQGMLNWSN/SQEP
E30           1     IFSNCPRG/SQEP

=> e tfdgrgaqvyignggpcvfi/sqep 5
E31           1     TFDDFCPECRP/SQEP
E32           1     TFDDFCPESRPLGLQGCA/SQEP
E33SEQ ID: 35 0 --> TFDGRGAQVYIGNGGPCVFI/SQEP
E34           1     TFDGVADYLQTYH/SQEP
E35           1     TFDQKHQRVDDSERCLQLLTRNIPEFLRRYVTMGETWLHHYTPESNRQSAQWTA
                    TGEPAPKRGKTQKSAGKVMASVFWDAHGIFFIEYLQKGKIINSDYYKALLERLK
                    VKSAAKRPHMKKKKVLFHQDNAPCHKSLRTMAKIDELGFELLPHPP/SQEP
                                  ---> SEQ ID: 34 out of sequence
                                       See last page.
=> e ignggpcvfikrvsnviihg/sqep 5
E36           2     IGNCPLG/SQEP
E37           1     IGNEDCTPWMSTLITPLPSCRDYVEQQACRIETPGSPYLAKQQCCGELANIPQQ
                    CRCQALRYFMGPKSRPDQSGLMELPGCPREVQMDFVRILVTPGYCNLTTVHNTP
                    YCLAMEESQWS/SQEP
E38SEQ ID: 36 0 --> IGNGGPCVFIKRVSNVIIHG/SQEP
E39           1     IGNLPIR/SQEP
E40           1     IGNTNALRTVNVGAGIATLEGAIIKATTTKLTNAASVLTLTNVNAVLTGAIDNT
                    TGVDNVGVLNLNGALSQVTGNIGNTNALATISVGAGKATLGGAVIKATTTKLTD
                    NASQVTFTNPVVVTGAIDNTGNANNGIVTFTGDSTVTGNIGNTNALATISVGAG
                    KATLGGAIIKATTTKLTDNASQVTFTNPVVVTGAIDNT/SQEP

=> e krvsnviihglylygcstsv/sqep 5
E41           1     KRVG/SQEP
E42           1     KRVKAS/SQEP
E43SEQ ID: 37 0 --> KRVSNVIIHGLYLYGCSTSV/SQEP
E44           1     KRVVMRVDF/SQEP
E45           2     KRVYIHPA/SQEP

=> e lgnvlinesfgvepvhpqdg/sqep 5
E46           1     LGNRRALILLAQMRRIS/SQEP
E47           1     LGNRRALILLGQMGRIS/SQEP
E48SEQ ID: 39 0 --> LGNVLINESFGVEPVHPQDG/SQEP
E49           1     LGNW/SQEP
E50           1     LGNWFGCT/SQEP

=> e gvepvhpqdgdaltlrtatn/sqep 5
E51           1     GVENPGGYCLTKWMILA/SQEP
E52           1     GVEPDANKLG/SQEP
E53SEQ ID: 40 0 --> GVEPVHPQDGDALTLRTATN/SQEP
E54           2     GVEQCCASVCSLYQLENYCN/SQEP
E55           2     GVERYLKDQQLLGIWGCSGKLIC/SQEP

=> e daltlrtatniwidhnsfsn/sqep 5
E56           1     DALPSSEDDDDDDDSSSEEKETDNTKPNRMPVAPYWTSPEKMEKKLHAVPAAKT
                    VKFKCPSSGTPNPTLRWLKNGKEFKPDHRIGGYKVRYATWSIIMDSVVPSDKGN
                    YTCIVENEYGSINHTYQLDVVERSPHRPILQAGLPANKTVALGSNVEFMCKVYS
                    DPQPHIQWLKHIEVNGSKIGPDNLPYVQILKTAGVNTT/SQEP
E57           1     DALSDSYTPDQDRVIHIQDCTAFWKLIRGRQRSSASPVGILTMPCCFPWRKHYT
                    WKGIKSLKLPSLAISDRTTENGPRLLVEAEQAKVFSHRGGNVTLPCKFYRDPTA
                    FGSGIHKIRIKWTKLTSDYLREVDVFVSMGYHKKTYGGYQGRVFLKGGSDNDAS
                    LIITDLTLEDYGRYKCEVIEGLEDDTAVVALELQGVVF/SQEP
E58SEQ ID: 41 0 --> DALTLRTATNIWIDHNSFSN/SQEP
```

```
E59             1      DAMGWMDF/SQEP
E60             1      DANDAGGQNSTECTLILTEGDSAKTLAVSGLGVVGRDKYGVFPLRGKILNVREA
                       SHKQIMENAEINNIIKIVGLQYKKNY/SQEP

=> e iwidhnsfsnssdglvdvtl/sqep 5
E61             1      IWHMQNARV/SQEP
E62             1      IWHSNLNDTTYQRT/SQEP
E63SEQ ID:42    0 --> IWIDHNSFSNSSDGLVDVTL/SQEP
E64             1      IWKHKGRDVILKKDVRFYC/SQEP
E65             1      IWLARKIRSDLTALTESYVKHQGLNKNINLDSADGMPVASTDQWSELTEAERLQ
                       ENLQAYRTFHVLLARLLEDQQVHFTPTEGDFHQAIHTLLLQVAAFAYQIEELMI
                       LLEYKIPRNEADGMPINVGDGGLFEKKLWGLKVLQELSQWTVRSIHDLRFIS/S
                       QEP

=> e ssdglvdvtltstgvtisnn/seqp 5
'SEQP' IS NOT A VALID EXPAND FIELD CODE FOR FILE 'REGISTRY'

=> e ssdglvdvtltstgvtisnn/sqep 5
E66             1      SSDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD/SQEP
E67             1      SSDEPSESSEPCCDSCRCTKSIPPQCHCADIRLNSCHSACKSCMCTRSMPGKCR
                       CLDTDDFCYKPCESMDKDDD/SQEP
E68SEQ ID:43    0 --> SSDGLVDVTLTSTGVTISNN/SQEP
E69             1      SSDHCGPLQRLKVKQQWAKAYGVGHERVELGIALWKSMFAQDNDARDLFKRVHG
                       EDVHSPAFEAHMARVFNGLDRVISSLTDEPVLNAQLEHLRQQHIKLGITGHMFN
                       LMRTGLAYVLPAQLGRCFDKEAWAACWDEVIYPGIKHD/SQEP
E70             1      SSDICPGFLQVLEALLLGSESNYEAALKPFNPASDLQNAGTQLKRLVDTLPQET
                       RINIVKLTEKILTSPLCEQDLRV/SQEP

=> e tstgvtisnnlffnhhkvml/sqep 5
E71             1      TSTEPQYQPGENL/SQEP
E72             1      TSTFSVSAAKALFESAKRPEVRNAAIAAAKNPFVRQTAKNVAQDEKARGAVLNA
                       VKDPSGGNKISAAFAVADANRKSDSVPPPPPHRGGTSPGKLSGSHSAIRSQLEN
                       MHIGGSVMSS/SQEP
E73SEQ ID:44    0 --> TSTGVTISNNLFFNHHKVML/SQEP
E74             1      TSTLSWLDEITMEELERNPYP/SQEP
E75             1      TSTRIVGG/SQEP

=> e lffnhhkvmllghddaysdd/sqep 5
E76             3      LFFG/SQEP
E77             2      LFFGLM/SQEP
E78SEQ ID:45    0 --> LFFNHHKVMLLGHDDAYSDD/SQEP
E79             1      LFFPV'ORN'LFFPV'ORN'/SQEP
E80             1      LFFV/SQEP

=> e lghddaysddksmkvtvafn/sqep 5
E81             1      LGGWTLNSAGYL/SQEP
E82             1      LGGYIQNCPLG/SQEP
E83SEQ ID:46    0 --> LGHDDAYSDDKSMKVTVAFN/SQEP
E84             1      LGHKSTSIRKGMCTNLSVPNP/SQEP
E85             1      LGHLAR/SQEP

=> e qfgpncgqrmpraryglvhv/sqep 5
E86             1      QFGGHNSVDFEEDTLPK/SQEP
E87             1      QFGGLM/SQEP
E88SEQ ID:47    0 --> QFGPNCGQRMPRARYGLVHV/SQEP
```

E89 4 QFGSPK/SQEP
E90 2 QFHP/SQEP

=> e praryglvhvannnydpwti/sqep 5
E91 1 PRANLTVVLLRGEKELKREPAVGEP/SQEP
E92 1 PRAQPIGPVL/SQEP
E93 SEQ ID:49 0 --> PRARYGLVHVANNNYDPWTI/SQEP
E94 1 PRASASYYEQYHSLNEIYSWIEFITERHPDMLTKIHIGSSFEKYPLYVLKVSGK
EQTAKNAIWIDCGIHAREWISPAFCLWFIGHITQFYGIIGQYTNLLRLVDFYVM
PVVNVDGYDYSWKKNRMWRKNRSFYANNHCIGTDLNRNFASKHWCEEGASSSSC
SETYCGLYPESEPEVKAVASFLRRNINQIKAYISMHSY/SQEP
E95 1 PRASMKTVGPSDMYVH/SQEP

=> e annnydpwtiyaiggssnpt/sqep 5
E96 2 ANNKQQTDIEQLMPKYNSTFAKMNGNYSYKLIWDDSMVSDALQEAKEQYSTNAT
FKIRRRKVFIKGDNATMEEKVEGALKYPVLRADKFLRRLLWFTHYACNGYYDTK
GGHDVLTVACLYREIDYKNSHY/SQEP
E97 1 ANNLRGCGLY/SQEP
E98 SEQ ID:50 0 --> ANNNYDPWTIYAIGGSSNPT/SQEP
E99 11 ANNP/SQEP
E100 1 ANNPLYKEATSTFTNITYRGT/SQEP

=> e yaiggssnptilsegnsfta/sqep 5
E101 3 YAHWAWFK/SQEP
E102 1 YAHWKS/SQEP
E103 SEQ ID:51 0 --> YAIGGSSNPTILSEGNSFTA/SQEP
E104 1 YAIGYPS/SQEP
E105 1 YAIPVGP/SQEP

=> e ilsegnsftapnesykkqvt/sqep 5
E106 1 ILRRVGLEKLLEDAGLNSWLGEGGRQLSGGELRRLDIARALLHDAPLVLLDEPT
EA/SQEP
E107 2 ILRSL/SQEP
E108 SEQ ID:52 0 --> ILSEGNSFTAPNESYKKQVT/SQEP
E109 1 ILSEKYKSDLDSIKKYINDKQGENE/SQEP
E110 1 ILSELPFK/SQEP

=> e csnwvwqstqdvfyngayfv/sqep 5
E111 1 CSNV'ORN-ORN'DSQ/SQEP
E112 1 CSNWSKRDRNTAIGAGAGALGGAVLTDGSTLGTLGGAAVGGVIGHQVGK/SQEP
E113 SEQ ID:55 0 --> CSNWVWQSTQDVFYNGAYFV/SQEP
E114 1 CSPPLK'NLE'ADPNRFRGKD/SQEP
E115 1 CSPPLVHDSDLEHVLTPSTSWTTKILKFI/SQEP

=> e dvfyngayfvssgkyeggni/sqep 5
E116 1 DVFTVTNV/SQEP
E117 1 DVFTVTNVGPSSMFVH/SQEP
E118 SEQ ID:56 0 --> DVFYNGAYFVSSGKYEGGNI/SQEP
E119 1 DVFYPYPYASGS/SQEP
E120 5 DVGAGTP/SQEP

=> e ssgkyeggniytkkeafnve/sqep 5
E121 1 SSGGDPEIVMHSFNCGGEFFYCNTSQLFNSTWNGTEGSNSTKGNDTITLPCRIK
QIINLWQEVGKAMYAPPIEGQIGRSSNITGLLLTRDGGNNNSTNETFRPGGGN/
SQEP

```
E122            1      SSGGDPEIVTHSFNC/SQEP
E123SEQ ID:57   0  --> SSGKYEGGNIYTKKEAFNVE/SQEP
E124            1      SSGLRINSAKDD/SQEP
E125            1      SSGRYARLG/SQEP

=> e ytkkeafnvengnatpqltk/sqep 5
E126            1      YTKGILGFVFTLTV/SQEP
E127            1      YTKGILGFVFTLTVC/SQEP
E128SEQ ID:58   0  --> YTKKEAFNVENGNATPQLTK/SQEP
E129            1      YTKLA/SQEP
E130            1      YTKLLAKLALQKYLASILGSRT/SQEP

=> e ngnatpqltknagvltcsls/sqep 5
E131            1      NGNAEEVVIRSANFTDNAKTIIV/SQEP
E132            1      NGNALLA/SQEP
E133SEQ ID:59   0  --> NGNATPQLTKNAGVLTCSLS/SQEP
E134            1      NGNATPQLTKNAGVLTCSLSKR/SQEP
E135            1      NGNEEWFLVGRVLDRVCFLA/SQEP

=> e nagvltcslskrc/sqep 5
E136            1      NAGVC/SQEP
E137            1      NAGVLTCSLSKR/SQEP
E138SEQ ID:60   0  --> NAGVLTCSLSKRC/SQEP
E139            2      NAGVTQTPKFRVLKTGQSMTLLCAQDMNHEYMYWYRQDPGMGLRLIHYSVGEGT
                       TAKGEVPDGYNVSRLKKQNFLLGLESAAPSQTSVYFCASRTATQPQHFGDGTRL
                       SILPGGGGSGGGGSGGGGSGGGGSGAQQQVKQSPQSLIVQKGGISIINCAYENT
                       AFDYFPWYQQFPGKGPALLIAIRPDVSEKKEGRFTISF/SQEP
E140            1      NAGVTQTPKSRVLKTGQSMTLLCAQDMNHEYMYWYRQDPGKGLRLIHYSVGEGT
                       TAKGEVPDGYNVSRLKKQNFLLGLESAAPSQTSVYFCASRTATQPQHFGDGTRL
                       SITPGGGGSGGGGSGGGGSGGGGSGAQQQVKQSPQSLSVQKGGRSIINCAYENT
                       AFDYFPWYQQFPGKGPALLIAIRPDVSEKKEGRFTISF/SQEP

=> e dnpidscwrgdsnwaqnrmkdsnwaqnrmkladcavgfgsstmggkggdl/sqep 5
E141            1      DNPGEDAPAEDLAR/SQEP
E142            1      DNPIDSCWRGDSNWAQNRMK/SQEP
E143SEQ ID:66   0  --> DNPIDSCWRGDSNWAQNRMKDSNWAQNRMKLADCAVGFGSSTMGGKGGDL/SQE
                       P
E144            1      DNPIDSCWRGDSNWAQNRMKLADCAVGFGSSTMGGKGGDLYTVTNSDDDPVNPA
                       PGTLRYGATRDRPLWIIFSGNMNIKLKMPMYIAGYKTFDGRGAQVYIGNGGPCV
                       FIKRVSNVIIHGLYLYGCSTSVLGNVLINESFGVEPVHPQDGDALTLRTATNIW
                       IDHNSFSNSSDGLVDVTLTSTGVTISNNLFFNHHKVML/SQEP
E145            1      DNPIDSCWRGDSNWAQNRMKLADKAVG/SQEP

=> e kmpmyiagyktfdqrgaqvyignggpcvfi/sqep 5
E146            1      KMNDDVDGIVRTPLAELLDGE/SQEP
E147            1      KMNDSMDTSNKEEK/SQEP
E148SEQ ID:67   0  --> KMPMYIAGYKTFDQRGAQVYIGNGGPCVFI/SQEP
E149            1      KMPQPTRPYSFMELCREYTLEQLLKFLNVTLDTLMLPCHFCSSFMDLNNKASYL
                       ASQLKVIVKDCCFKGACIKCRRKLAFAERQKYQVCVGEADLVEAMVGSHVINLT
                       VRCSECLALLTASEKLDAKCELQTFILVRHMWRTSCRACRTPAIEC/SQEP
E150            1      KMPYEPCLPQYPHINGSVKT/SQEP

=> e daltlrtatniwidhnsfsnssdglvdvtl/sqep 5
E151            1      DALPSSEDDDDDDDSSSEEKETDNTKPNRMPVAPYWTSPEKMEKKLHAVPAAKT
                       VKFKCPSSGTPNPTLRWLKNGKEFKPDHRIGGYKVRYATWSIIMDSVVPSDKGN
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```
                        YTCIVENEYGSINHTYQLDVVERSPHRPILQAGLPANKTVALGSNVEFMCKVYS
                        DPQPHIQWLKHIEVNGSKIGPDNLPYVQILKTAGVNTT/SQEP
E152            1       DALSDSYTPDQDRVIHIQDCTAFWKLIRGRQRSSASPVGILTMPCCFPWRKHYT
                        WKGIKSLKLPSLAISDRTTENGPRLLVEAEQAKVFSHRGGNVTLPCKFYRDPTA
                        FGSGIHKIRIKWTKLTSDYLREVDVFVSMGYHKKTYGGYQGRVFLKGGSDNDAS
                        LIITDLTLEDYGRYKCEVIEGLEDDTAVVALELQGVVF/SQEP
E153SEQ ID: 68   0  --> DALTLRTATNIWIDHNSFSNSSDGLVDVTL/SQEP
E154            1       DAMGWMDF/SQEP
E155            1       DANDAGGQNSTECTLILTEGDSAKTLAVSGLGVVGRDKYGVFPLRGKILNVREA
                        SHKQIMENAEINNIIKIVGLQYKKNY/SQEP

=> e lffnhhkvmllghddaysddksmkvtvafnqfgpncgqrmpraryglvhv/sqep 5
E156            3       LFFG/SQEP
E157            2       LFFGLM/SQEP
E158SEQ ID: 69   0  --> LFFNHHKVMLLGHDDAYSDDKSMKVTVAFNQFGPNCGQRMPRARYGLVHV/SQE
                        P
E159            1       LFFPV'ORN'LFFPV'ORN'/SQEP
E160            1       LFFV/SQEP

=> e csnwvwqstqdvfyngayfvssgkyeggniytkkeafnve/sqep 5
E161            1       CSNV'ORN-ORN'DSQ/SQEP
E162            1       CSNWSKRDRNTAIGAGAGALGGAVLTDGSTLGTLGGAAVGGVIGHQVGK/SQEP
E163SEQ ID: 70   0  --> CSNWVWQSTQDVFYNGAYFVSSGKYEGGNIYTKKEAFNVE/SQEP
E164            1       CSPPLK'NLE'ADPNRFRGKD/SQEP
E165            1       CSPPLVHDSDLEHVLTPSTSWTTKILKFI/SQEP
```

=> s e3
L1 1 (DNPIDSCWRGDSNWAQNRMK)/SQEP (SEQ ID: 26)
(DNPIDSCWRGDSNWAQNRMK/SQEP AND SQL=20)

=> file ca;s l1 or l1/d
FILE 'CA' ENTERED AT 13:50:58 ON 13 OCT 93
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT

FILE COVERS 1967 - 2 Oct 93 (931002/ED) VOL 119 ISS 14.

L2 1 L1 OR L1/D

=> d bib abs hitrn 1

L2 ANSWER 1 OF 1
AN CA112(8):62606s
TI Sugar conjugate of cedar pollen allergen as hyposensitization agent
AU Matsuhashi, Tyoku; Usui, Mitsuko; Mitsuhashi, Masakazu; Ando, Shunsaku
CS Hayashibara Biochemical Laboratories, Inc.
LO Japan
SO Eur. Pat. Appl., 6 pp.
PI EP 308147 A1 22 Mar 1989
DS R: DE, FR, GB
AI EP 88-308370 9 Sep 1988
PRAI JP 87-228781 12 Sep 1987
JP 88-184487 26 Jul 1988
IC ICM A61K039-36
ICS C07K015-10; A61K047-00
SC 63-4 (Pharmaceuticals)
DT P
CO EPXXDW
PY 1989
LA Eng
AN CA112(8):62606s
AB A hyposensitization agent is prepd. by covalently attaching a saccharide, e.g. homo- and heteroglycans, for example, starch, amylose, dextran, polysucrose, pullulan, elsinan, curdlan, gum arabic, gum tragacanth, guar gum, xanthan gum, carrageenan, pectin, cellulose, glucomannan, chitosan, and lipopolysaccharide, and their derivs. and partial hydrolyzates, to a cedar pollen allergen. The hyposensitization agent can be administered to a cedar pollenosis patient without eliciting anaphylaxis and allergy within a shortened hyposensitization period because the hyposensitization agent enhances the prodn. of IgG and M antibodies which are specific to intact cedar pollen allergen, but reduces the prodn. of IgE antibody which is specific to the allergen and responsible for anaphylaxis and allergy. A soln. of 5 g pullulan in 400 mL water was adjusted to pH 10.7 with NaOH, treated with 3 g BrCN, adjusted to pH 5 with HCl and dialyzed against water. The resulting activated pullulan soln. was treated with 200 mL 0.015% cedar pollen allergen soln., followed, after 24 h, by addn. of acetone (1:3 by vol.) to obtain a

ppt., which was sepd., dissolved in 0.001M acetate buffer (pH 5), and centrifuged. The supernatant was purified on CM sephadex, to give a hyposensitization agent. The agent, administered repeatedly i.p. to mice, together with Al(OH)3, increased the titer of G and M antibodies, but not that of E antibodies, compared to controls administered a mixt. of cedar pollen allergen and pullulan. A partial amino acid sequence of the cedar pollen allergen is given.

IT 124832-22-0 **124832-23-1** 124832-24-2 124832-25-3
(of cedar pollen allergen, for allergy treatment)

```
=> sel hit rn
E166 THROUGH E166 ASSIGNED

=> file reg;s l1 and e166
FILE 'REGISTRY' ENTERED AT 13:52:25 ON 13 OCT 93
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
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STRUCTURE FILE UPDATES:  08 OCT 93   HIGHEST RN 150519-96-3
DICTIONARY FILE UPDATES: 13 OCT 93   HIGHEST RN 150519-96-3


L3            1 L1 AND 124832-23-1/RN

=> d l3 rn cn kwic

L3   ANSWER 1 OF 1  COPYRIGHT 1993 ACS
RN   124832-23-1  REGISTRY
CN   L-Lysine, L-.alpha.-aspartyl-L-asparaginyl-L-prolyl-L-isoleucyl-L-
     .alpha.-aspartyl-L-seryl-L-cysteinyl-L-tryptophyl-L-arginylglycyl-L-
     .alpha.-aspartyl-L-seryl-L-asparaginyl-L-tryptophyl-L-alanyl-L-
     glutaminyl-L-asparaginyl-L-arginyl-L-methionyl- (9CI)  (CA INDEX
     NAME)
FS   PROTEIN SEQUENCE
SQL  20

SEQ      1 DNPIDSCWRG DSNWAQNRMK
           ========== ==========
HITS AT:   1-20
```

SEQ ID: 26

FILE 'REGISTRY' ENTERED AT 14:12:54 ON 13 OCT 93

=> e kmpmyiagyktfdgrgaqvy/sqep 5

E167	1		KMNDDVDGIVRTPLAELLDGE/SQEP
E168	1		KMNDSMDTSNKEEK/SQEP
E169	0	-->	KMPMYIAGYKTFDGRGAQVY/SQEP
E170	1		KMPQPTRPYSFMELCREYTLEQLLKFLNVTLDTLMLPCHFCSSFMDLNNKASYL ASQLKVIVKDCCFKGACIKCRRKLAFAERQKYQVCVGEADLVEAMVGSHVINLT VRCSECLALLTASEKLDAKCELQTFILVRHMWRTSCRACRTPAIEC/SQEP
E171	1		KMPYEPCLPQYPHINGSVKT/SQEP

=>